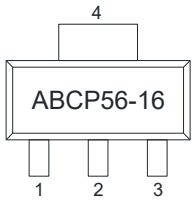
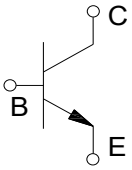
1. Features

- Power dissipation of 1500mW
- High stability and high reliability

2. Mechanical Data

- SOT-223 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

3. Pin configuration

Pin	Function	Outline	Schematic
1	Base		
3	Emitter		
2,4	Collector		

4. Specification

Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 ˚C ambient temperature unless otherwise specified.

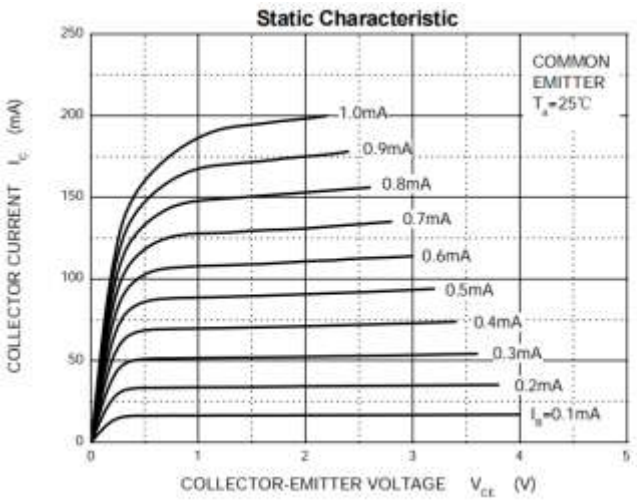
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	1000	mA
Collector Power Dissipation	P_C	1500	mW
Junction Temperature	T_j	150	˚C
Storage Temperature	T_{STG}	-55~150	˚C

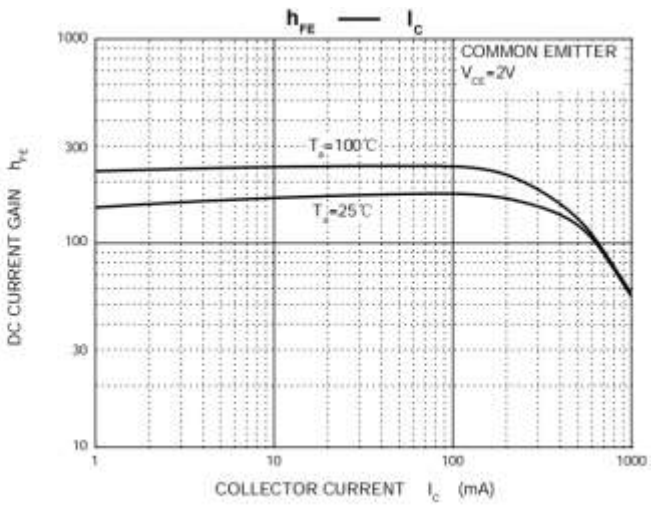
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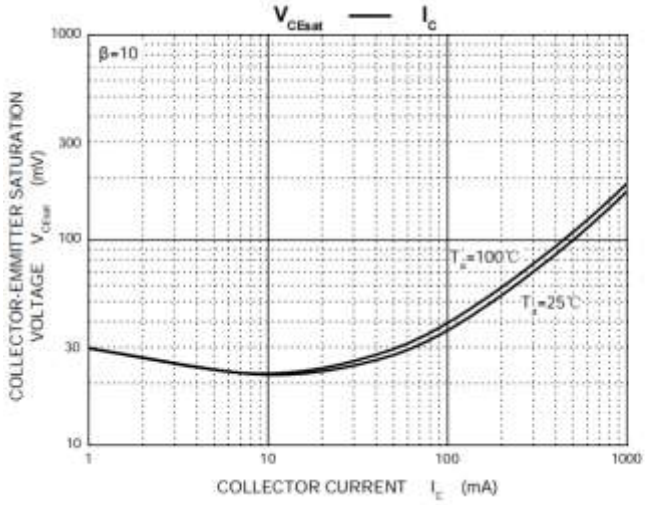
Electrical Characteristics(At TA = 25℃ unless otherwise specified)

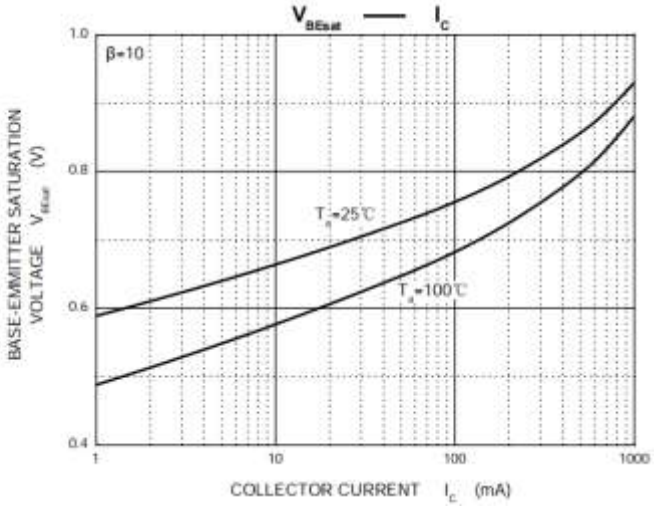
Parameters	Symbols	Test Condition	Limits			
			Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100uA, I_E=0	100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10uA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CE}=80V, I_E=0			100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC current gain	h_{FE1}	V_{CE}=2V, I_C=150mA	63		250	
	h_{FE2}	V_{CE}=2V, I_C=5mA	40			
	h_{FE3}	V_{CE}=2V, I_C=500mA	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA			0.50	V
Base -emitter saturation voltage	$V_{BE(sat)}$	I_C=500mA, I_B=50mA			1.20	V
Transition frequency	f_T	V_{CE}=5V, I_C=10mA, f=100MHz	100			MHz

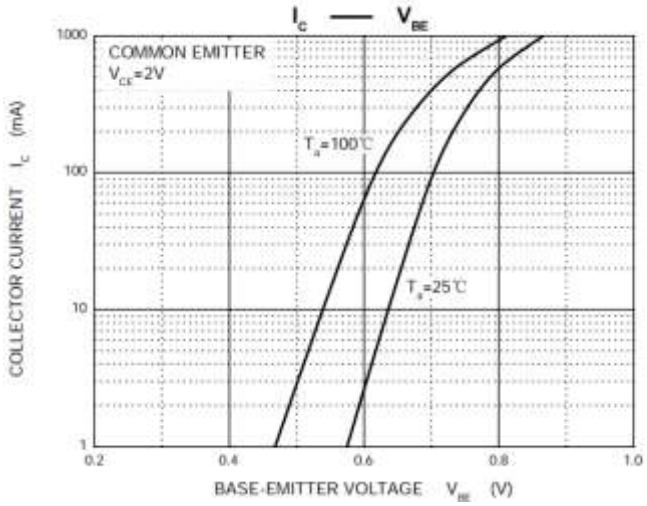
5. Typical Characteristic

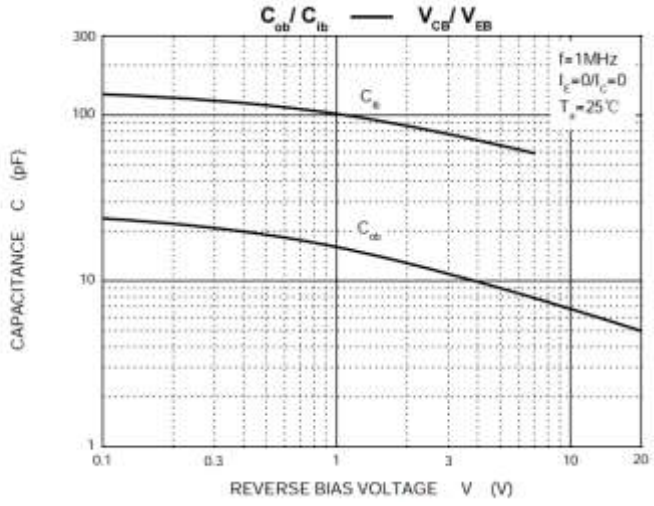


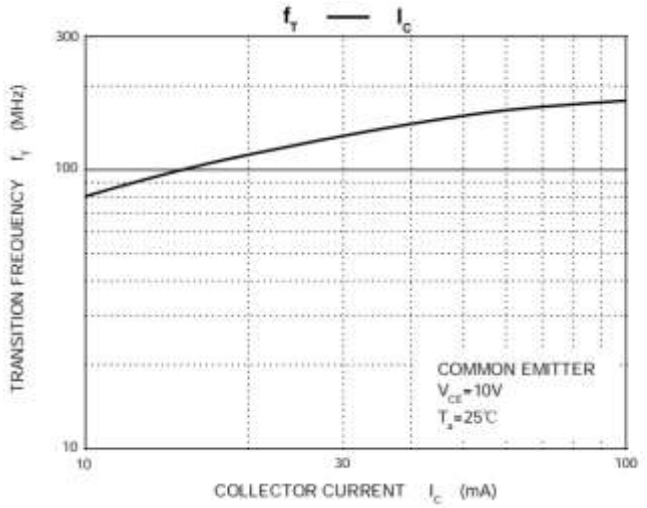


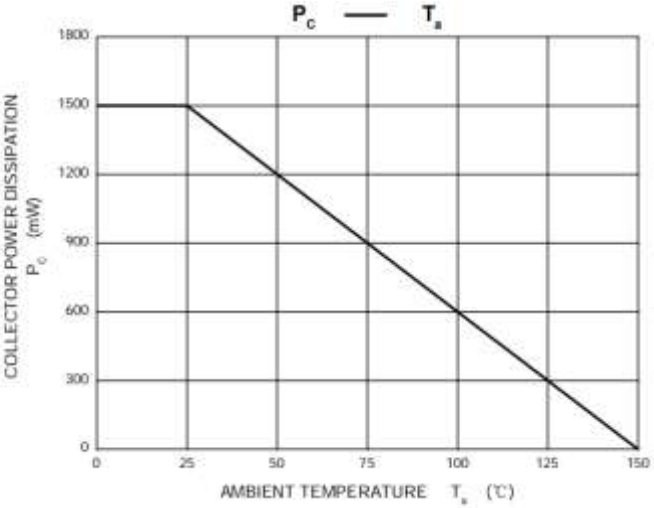

V_{CEsat} — I_C
β=10
T_a=100℃
T_a=25℃
COLLECTOR-EMMITTER SATURATION VOLTAGE V_{CEsat} (mV)
COLLECTOR CURRENT I_C (mA)


V_{BEsat} — I_C
β=10
T_a=25℃
T_a=100℃
BASE-EMMITTER SATURATION VOLTAGE V_{BEsat} (V)
COLLECTOR CURRENT I_C (mA)

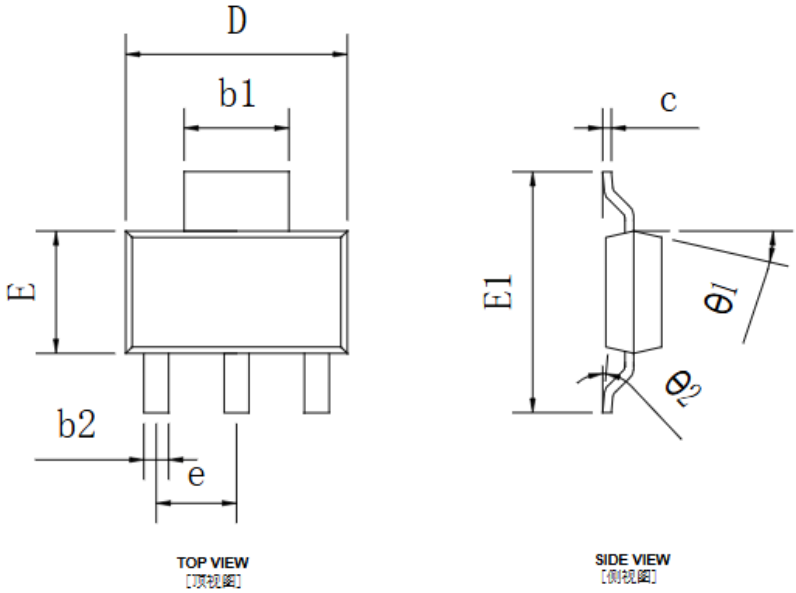

I_C — V_{BE}
COMMON EMITTER
V_{CE}=2V
T_a=100℃
T_a=25℃
COLLECTOR CURRENT I_C (mA)
BASE-EMITTER VOLTAGE V_{BE} (V)

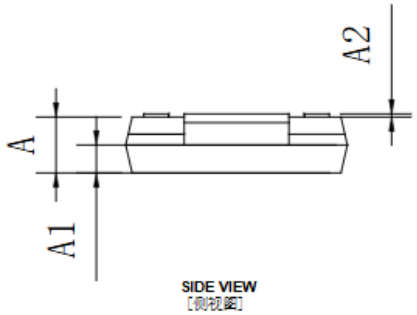

C_{ob} / C_{ib} — V_{CB} / V_{EB}
f=1MHz
I_E=0/I_C=0
T_a=25℃
C_{ib}
C_{ob}
CAPACITANCE C (pF)
REVERSE BIAS VOLTAGE V (V)


f_T — I_C
COMMON EMITTER
V_{CE}=10V
T_a=25℃
TRANSITION FREQUENCY f_T (MHz)
COLLECTOR CURRENT I_C (mA)


P_C — T_a
COLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE T_a (℃)

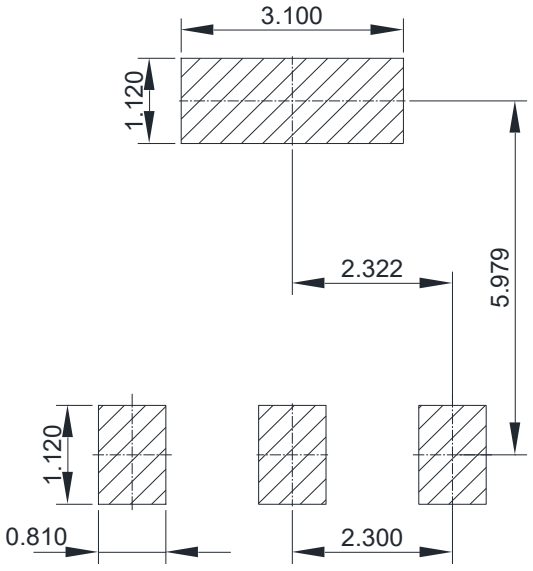
6. Dimension and Patterns (SOT-223)





编号	尺寸（mm）		
	Min	TYP	Max
A	1.550	1.600	1.650
A1	0.770	0.800	0.830
A2	0.000	0.050	0.100
D	6.300	6.350	6.400
E	3.450	3.500	3.550
E1	6.800	6.900	7.070
b1	2.950	3.000	3.050
b2	0.660	0.710	0.760
e	2.250	2.300	2.350
c	0.200	0.250	0.300
θ1	13° TYP		
θ2	0°	--	7°

7. Recommended Soldering Footprint



DIMENSIONS: MILLIMETERS

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